



This is a digital copy of a book that was preserved for generations on library shelves before it was carefully scanned by Google as part of a project to make the world's books discoverable online.

It has survived long enough for the copyright to expire and the book to enter the public domain. A public domain book is one that was never subject to copyright or whose legal copyright term has expired. Whether a book is in the public domain may vary country to country. Public domain books are our gateways to the past, representing a wealth of history, culture and knowledge that's often difficult to discover.

Marks, notations and other marginalia present in the original volume will appear in this file - a reminder of this book's long journey from the publisher to a library and finally to you.

Usage guidelines

Google is proud to partner with libraries to digitize public domain materials and make them widely accessible. Public domain books belong to the public and we are merely their custodians. Nevertheless, this work is expensive, so in order to keep providing this resource, we have taken steps to prevent abuse by commercial parties, including placing technical restrictions on automated querying.

We also ask that you:

- + *Make non-commercial use of the files* We designed Google Book Search for use by individuals, and we request that you use these files for personal, non-commercial purposes.
- + *Refrain from automated querying* Do not send automated queries of any sort to Google's system: If you are conducting research on machine translation, optical character recognition or other areas where access to a large amount of text is helpful, please contact us. We encourage the use of public domain materials for these purposes and may be able to help.
- + *Maintain attribution* The Google "watermark" you see on each file is essential for informing people about this project and helping them find additional materials through Google Book Search. Please do not remove it.
- + *Keep it legal* Whatever your use, remember that you are responsible for ensuring that what you are doing is legal. Do not assume that just because we believe a book is in the public domain for users in the United States, that the work is also in the public domain for users in other countries. Whether a book is still in copyright varies from country to country, and we can't offer guidance on whether any specific use of any specific book is allowed. Please do not assume that a book's appearance in Google Book Search means it can be used in any manner anywhere in the world. Copyright infringement liability can be quite severe.

About Google Book Search

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Book Search helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>

Swansea, you may depend upon it, is destined to become the Ocean Port of England."—Sir H. HUSSEY VIVIAN, Bart., M.P.

SWANSEA.

The affairs of the Port of Swansea are administered by a Public Trust, and the Rates are charged alike to all Persons in respect of the same description of Vessels and of Goods.

The Prince of Wales' Dock possesses one of the largest and deepest Locks in the Bristol Channel. The North and South Docks, though of older date, are supplied with the most modern Hydraulic Appliances. The Docks are surrounded by over twenty miles of Railway (the property of the Trustees), connecting them with the great Railway systems, viz., the Great Western, London and North-Western, and Midland, which enter Swansea by independent routes. The Quays, upwards of three miles in length, are furnished with 19 Hydraulic Coal Tips, and Hydraulic and other Cranes.

The Number of Vessels that entered and cleared in 1888 was 9,066, of 2,491,666 net reg. tons.

The total Trade of the Port in imports and exports in 1888 amounted to 2,607,358 tons, of the estimated value of £10,181,307. The Tonnage of Imports shews an increase of 45·19 per cent., and of Exports 85·74 per cent., whilst the Gross Revenue resulting from the foregoing discloses an increase of 70·83 per cent., compared with the corresponding figures for 1878.

These important increases are, to a very great extent, due to the excellent accommodation provided by the Prince of Wales' Deep Sea Docks, which were opened in 1882, and which are 40 miles nearer the open sea than Cardiff or Barry.

The quantity of Copper smelted in the Local Works in a year is about 21,000 tons, of the value of £1,631,250; Steel, 500,000 tons, of the value of £2,500,000. The Spelter, or Zinc, manufactured in Swansea forms 19·20th of the whole production of the Kingdom, of the total value of £500,000, one year's make of Tin and Terne Plates in the neighbourhood of Swansea is about six million boxes, valued at £4,000,000 sterling. The total shipment of Tin Plates at Swansea in 1878 was 211,225 boxes, weighing 12,425 tons, which had increased in 1888 to 3,370,803 boxes of 201,896 tons weight, of the value of £2,826,544. The manufacture of Chemicals, Patent Fuel, Welsh Woollen Goods, and Railway and Engineering Plant are also among the Staple trades of the Town and Port. There are over 140 Works of 36 varieties, employing upwards of 30,000 hands, within a radius of four miles from Swansea Harbour.

On the completion of the Rhondda and Swansea Bay Railway, Swansea will be the nearest Port to the celebrated Rhondda Valley. The boring of the Tunnel through the Mountain, the last link of this important line, has been effected, and during the coming summer the line will be open for traffic. Coal of the same quality as that known as "Cardiff Coal" will then be shipped under the most favourable conditions. In addition the line also passes through the Avan Valley, a virgin coal field, to which shippers are already directing their attention in view of the partial exhaustion of the older Rhondda Workings. This Valley *lies between Swansea and the Rhondda district*, and is therefore MANY MILES NEARER TO SWANSEA THAN TO CARDIFF OR BARRY.

The Mumbles Lighthouse Signal Station is connected with the Post Office system of Telegraphs. Vessels calling for orders can communicate with the owners without lowering a boat—good and sheltered anchorage being found under the Mumbles Head at any state of the tide free of charge. Registered Telegraph Address: "Swansea Bay Signal Station."

For information on any point connected with the Port and Harbour apply to

JOHN DIXON,

General Superintendent

Registered Address of Telegrams: "DIXON," SWANSEA.

Entered at Stationers' Hall, and Copyright in the United States.

THE
"SHIPPING WORLD" YEAR BOOK:

A DESK MANUAL

IN
TRADE, COMMERCE, AND NAVIGATION.

EDITED BY
EVAN ROWLAND JONES,
[United States Consul.]

390.

"Infinite riches in a little room."

C. MARLOWE.

London :

PRINTED AND PUBLISHED
AT THE
"SHIPPING WORLD" OFFICE,
GRESHAM PRESS BUILDINGS, LITTLE BRIDGE STREET.

1890.

The Shipping World Year Book

AND

Port Directory.

ALMANACK FOR 1890.

ARTICLES OF THE CALENDAR FOR THE YEAR 1890.

Golden Number	...	...	10	Dominical Letter...	...	F
Epact	...	...	9	Roman Indiction...	...	3
Solar Cycle	...	...	23	Julian Period	...	6603

ECLIPSES.

- June 17th—Annular Eclipse of the Sun, visible as a partial Eclipse at Greenwich. 8.20 a.m.
- Nov. 25th—Partial Eclipse of the Moon, invisible at Greenwich. First contact, 1.28 p.m.
- December 11th—Total Eclipse of the Sun, invisible at Greenwich.

- The Year 5651 of the Jewish Era commences on Sept. 15, 1890.
- Ramadân (Month of Abstinence observed by the Turks) commences on April 21, 1890.
- The Year 1308 of the Mohammedan Era commences on August 17, 1890.



THE "SHIPPING WORLD" YEAR BOOK 

1890.

LORD SALISBURY'S SECOND MINISTRY.

ENTERED OFFICE AUGUST 3, 1886.

Office.

Prime Minister & Foreign Secretary
 Lord Chancellor.....
 Lord President of the Council .
 Lord Privy Seal
 First Lord of the Treasury
 Chancellor of the Exchequer
 Home Secretary
 Colonial Secretary.....
 Indian Secretary
 War Secretary
 First Lord of the Admiralty
 Chief Secretary for Ireland
 Lord Chancellor of Ireland
 President of the Board of Trade..
 Chancellor of Duchy of Lancaster
 President Local Govt. Board ...
 President Board of Agriculture ..

[The above form the Cabinet.]

FOREIGN MAILS.

No Colonial or Foreign letter to exceed 2 feet in length, or 1 foot in width or depth.

**FOREIGN MONEYS,
AND THEIR VALUES IN ENGLISH AND UNITED STATES
MONEY.**

Country.	Monetary Units.	Standard.	Value in English Money.	Value in U.S.
Argentina Republic ..	Peso fuerte ..	Gold ..	£ s. d.	\$ cts.
Austria ..	Florin ..	Silver ..	0 4 2	1 00'0
Belgium ..	Franc ..	Gold ..	0 2 11	41'3
Bolivia ..	Dollar ..	Silver ..	0 0 9½	19'30
Brazil ..	Milreis of 1,000 reis..	Gold ..	0 3 1	83'6
British Possessions in North America ..	Dollar ..	Gold ..	0 2 3	54'5
Central America ..	Peso ..	Silver ..	0 4 0	1 00'00
Chili ..	Peso ..	Gold ..	0 3 1	83'6
China ..	Tael ..	Pure Silver ..	0 3 0	91'23
Cuba ..	Peso ..	Gold ..	0 6 8½	1 01'00
Denmark ..	Crown ..	Gold ..	0 3 10½	98'58
Ecuador ..	Peso ..	Silver ..	0 1 1	26'80
Egypt ..	Pound of 100 piasters.	Gold ..	0 3 1	83'6
France ..	Franc ..	Gold and Silver ..	1 0 6	4 97'4
Great Britain ..	Pound Sterling ..	Gold ..	0 0 9½	19'30
Greece ..	Drachma ..	Gold ..	1 0 0	4 86'65
German Empire ..	Mark ..	Gold ..	0 0 9½	19'30
Haiti ..	Dollar ..	Silver ..	0 1 0	23'42
Jamaica ..	Pound Sterling ..	Gold ..	0 4 2	1 00'00
Japan ..	Yen ..	Gold and Silver ..	1 0 0	4 86'65
India ..	Rupce of 16 annas ..	Silver ..	0 4 2	99'70
Italy ..	Lira ..	Gold and Silver ..	0 2 0	39'7
Liberia ..	Dollar ..	Gold ..	0 0 9½	19'30
Mexico ..	Dollar ..	Silver ..	0 4 0	1 00'00
Netherlands ..	Florin ..	Gold and Silver ..	0 3 7	90'9
Norway ..	Crown ..	Gold ..	0 1 8	40'20
Paraguay ..	Peso ..	Gold ..	0 1 1	26'80
Peru ..	Sol ..	Silver ..	0 4 2	1 00'00
Porto Rico ..	Peso ..	Gold ..	0 3 0	83'6
Portugal ..	Milreis of 1,000 reis ..	Gold ..	0 3 10	98'58
Russia ..	Rouble of 100 copecks ..	Silver ..	0 4 5	1 08'0
Sandwich Islands ..	Dollar ..	Gold ..	0 3 2	66'9
Spain ..	Peseta of 100 centimes ..	Gold and Silver ..	0 4 2	1 00'0
Sweden ..	Crown ..	Gold ..	0 0 9½	19'0
Switzerland ..	Franc ..	Gold and Silver ..	0 1 1	26'80
Tripoli ..	Mahbub of 20 piasters ..	Silver ..	0 0 9½	19'30
Tunis ..	Piaster of 20 caruba ..	Silver ..	0 3 1	74'8
Turkey ..	Piaster ..	Gold ..	0 0 6	12'50
United States of Colombia ..	Peso ..	Silver ..	0 0 2½	04'0
Uruguay ..	Patacon ..	Gold ..	0 3 1	83'6
Venezuela ..	Dollar ..	Gold and Silver ..	0 3 11½	94'98

DISCOUNT PER CENT.

½ in	s. d.	in a £.	½ in	s. d.	in a £.	¾ in	s. d.	in a £.
3	0	6	25	2	6	25	4	6
7½	1	0	25	3	0	30	5	0
10	1	6	25	3	6	30	6	0
10	2	0	20	4	0	35	7	0

COLONIAL AND FOREIGN WEIGHTS AND MEASURES,

WITH BRITISH EQUIVALENTS.

Countries	Weights for Gold, Silver, &c.	Commercial Weights.	Cloth Measures.	Linear Measures.	Land Measures.	Grain Measures.	Liquid Measures.
AUSTRO- HUNGARY	Troy grains.	Imper. lbs.	Imper. inches.	Imperial.	Imper. acres.	Imper. bushels.	Imper. gallons.
MARK	4333	Pound ... 3.123	Ell, Vienna ... 30.66	Foot ... 12.43 inch	Joch ... 1.48	Metzen = 4 Viertel, 1 50	Eimer ... 12.44
THE FRENCH MET.	System has been introduced.	Centner ... 100 lbs.	Tricote— Wool ... 56.60	Mile ... 4.78 miles		Muth = 30 Metzen, 50.76	Fuder = 30 Eimer, 398.65
BAVARIA	See German	Empire	Silk ... 25.22				
BELGIUM	Same as in	France					
BRAZIL	Same as in	Portugal					
B. AYRES	Same as in	Spain					
CANADA	Same as in	Great Britain					
CHINA	Tael ... 580	Catty ... 13.3	Covid ... 14.68	Foot ... 13.12 inch			
		= 16 Taels.		Li ... .36 mile			
		Picul ... 133.33					
DENMARK	Mark ... 3613	Pound ... 1.10	ELL ... 24.71	Foot ... 12.36 inch	Tondeland ... 1.25	Barrel or Toende ... 3.83	Viertel ... 1.70
		Centner ... 110.25		Mile ... 4.68 miles		Last = 18 Tonnes ... 45.91	Oxhoft = 30 Viertel, 51.02
EGYPT	Rottolo ... 6654	Rottolo forfore ... 93	Pic ... 26.80			Kilow ... 2.9150	Almond ... 1.151
FRANCE	Gramme ... 15.43	Metrical system is also used.	Metre ... 39.37	Metre ... 39.37 inch	Are ... .005	Litre ... .007	Litre ... .26
		Kilogramme ... 2.20		Kilometre, .62 mile	Hectare ... 2.47	Hectolitre	Decalitre = 10 Litres, 2.20
		Quintal ... 220.50		Myriametre, 6.21 miles = 10 Kilometre.	= 100 Are.	= 100 Litres 2.75	Hectolitre = 100 Litres, 22.
GERMAN	Gramme	Kilogramme	Metre or Stab ...	Metre or Stab ...	Ar	Liter or Kanne	Litre or Kanne
EMPIRE	Same as in	France		Mile = 7500 Metres = 4.66 miles.	Same as in the Metrical System of France.		
GREECE	Same as in	France					
HAMBURG	Same as in	German Empire					
HOLLAND	Same as in	France			Hektare ... 2.47	Hektoliter ...	Hektoliter [22.
					Same as in the Metrical System of France.		Vat = 100 Kannen

Countries	Weights for Gold, Silver, &c.	Commercial Weights.	Cloth Measures.	Linear Measures.	Land Measures.	Grain Measures.	Liquid Measures.
INDIA.....	Troy grains.....16 (Government)	See, Govern. 2.66 = 80 Tolas. Manned, Govern. 82.28 = 40 Seers.	Imper. inches. Gun, Bombay...27. Gun, Bengal...36. Cord, Madras 18.6	Imperial Mile Bengal, 1.13 miles	Imper. acres. Bigga, Bengal, .33 = 20 Cottahs. Cawney, Madras 1.38	Imper. bushels. Candy, Bombay.....24.25 = 20 Maunds. Grain is usually sold by weight.	Imper. gallons. Liquids are usually sold by weight, except at Calcutta, Madras, and Bombay, where the Imperial measures are used for wines and spirits.
ITALY.....	Gramma.....	Chilogramma.....	Metro.....	Metro.....	Ara.....	Litro.....	Litro.....
	Same as in the	Metrical System of France.			Same as in the	Metrical System of France.	
JAPAN.....	Monma .58.24	Kin.....1.33	Tanne used	Kang.....6 feet	Chō.....	Koku.....5.	
MALTA.....	Libbra.....4837	Pound.....1.74	Canna.....	Foot.....11.17 inch	Salma.....4.44	Salma.....7.82 Barile	.....9.35
MEXICO.....	Same as in Spain				Same as in Spain		
NORWAY.....	Same as in Denmark					Denmark	
PERU.....	Miskal... 47.7	Batman.....13.4	Royal Gun.....40	Parasang... 4 miles	The same as in	Artaba.....1.93	
POLAND.....	Same as in Spain						
PORTUGAL.....	See Russia				See Russia		
	Marc.....3542	Pound.....1.01	Varn.....43.20	Foot.....12.94 inch	Geira.....1.43	Moyo = 15 Fanegas, 28.30 Almuds	.....3.64
	The French	Metrical System is the	legal standard.	League... 3.84 miles	The French	Metrical System is the legal	standard.
PRUSSIA.....	See German				See German	Empire	
RUSSIA.....	Pound.....6318	Pound......90	Arshine.....28.	Foot.....13.75 inch	Deciatina... 2.70	Chetwert.....5.77	Vedro = 3.70 Oxhoft = 48.68 18 Vedros, 48.68 Gantang... 1.04
SINGAPORE.....	Bucal.....830	Pical = 100 Catties, or 1600 Tals, 133.33	Covid.....18.				
	British weights	and measures are used	generally in the sale	of European Goods,	British weights and	measures generally used in the sale of European	goods.
SPAIN.....	Genmo.....	Kilogrammo.....	Metro.....	Metro.....	Aren.....	Litro.....	Litro.....
	Same as in	the Metrical System of			Same as in France.		
SWEDEN.....	Marc.....3852	Pound......94	Ell.....23.36	Foot.....11.68 inch	Tunneland... 1.28	Tunna, 477 = 36 Kappor Kanna	..... 7
	Canter.....112.51	Canter.....112.51		Mile.....6.64 miles		4.03	
SWITZERLAND.....	Same as in France						
TURKEY.....	Cheques. 4917	Oke.....2.83	Long Pit.....	Berrt.....3.03 mile		Fortin = 4 Kilowes... 3.84 Almuds	..... 115.10
	Assimilated	to the French Metric			Assimilated to the	French Metric System.	
U. STATES.....	Same as in Great Britain				Same as in Britain	Same as the former	English measures
	The cwt. is	frequently reckoned	in 160 lbs. under the	name of Quintal.			

THERMOMETER.

19

THERMOMETER.

Fahrenheit, Réaumur, and the Centigrade Scales



Zero Fahrenheit corresponds with *minus* 32° Centigrade, and *minus* 40° Réaumur.

TIME, AT FULL AND CHANGE,
WHEN THE FOLLOWING LIGHTSHIPS SWING FROM FLOOD
TO EBB.

NAME OF LIGHTSHIP.	LAT.			LON.			TIME	OBSERVATIONS.
	°	'	"	°	'	"		
Bahama Bank	54	20	0	N	4	12	0	W 11 45 2nd high water.
Calshot	50	48	40	N	1	16	45	W 10 25 1st high water.
								12 0 2nd high water.
Cardigan Bay	52	24	30	N	5	0	30	W 10 30 "
Carnarvon Bay.....	53	5	40	N	4	44	30	W 10 30 "
Cockle	52	41	20	N	1	46	20	E 10 20
Corton	52	31	30	N	1	49	30	E 10 45 [then N.N.E. at 8
Dudgeon.....	53	15	0	N	0	56	0	E 7 0 Turns Eastward at 7,
East Goodwin	51	13	0	N	1	36	25	E 9 10 Uncertain.
English & Welsh Ground.	51	26	30	N	2	58	0	W 6 56 2nd high water.
Gallopier	51	45	0	N	1	55	50	E 12 0
Gull	51	16	0	N	1	28	25	E 9 13
Hasbro'	52	58	0	N	1	36	0	E 10 30
Helwick	51	31	0	N	4	24	0	W 6 0 2nd high water.
Inner Dowsing	53	19	20	N	0	34	20	E 7 0 Turns Eastwd. at 7, N.E.
								at 9, N.N.W. at 12.
Kentish Knock.....	51	39	30	N	1	41	0	E 11 20 Slack lasts about 20 min.
Leman and Ower.....	53	8	30	N	2	0	20	E 11 0
Lynn Well	53	1	25	N	0	25	10	E 6 20
Morecombe Bay	53	54	0	N	3	31	0	W 10 30 2nd high water.
Nab	50	42	15	N	0	59	25	W 12 0 About.
Newarp	52	45	0	N	1	53	0	E 10 30 [out from Sheerness.
Nore.....	51	29	0	N	0	48	0	E 12 30 The last 2 hours ebb, sets
North Goodwin.....	51	19	30	N	1	35	20	E 10 13 Uncertain.
Outer Dowsing.....	52	28	15	N	1	2	40	E 8 0 Turns' Eastward at 8,
Owers	50	38	35	N	0	41	0	W 10 35 About. [then N. at 9.
Royal Sovereign	50	42	40	N	0	26	50	E 10 45 Swings about 15 mins. be-
Seven Stones.....	50	3	50	N	6	4	30	W 5 0 2nd high water. [fore H.W
Shambles	50	30	50	N	2	20	0	W 10 20 "
Shipwash	52	1	30	N	1	23	0	E 11 10 Slack lasts about 40 mins.
South Sand Head	51	9	12	N	1	28	10	E 9 0 Uncertain.
Spurn	53	34	0	N	0	13	0	E 6 20
Suak	51	50	40	N	1	30	30	E 11 40 Slack lasts abou 40 mins.
Tongue	51	29	0	N	1	19	20	E 12 15
Varne	50	56	10	N	1	16	50	E 8 20 Uncertain.

SPECIFIC GRAVITY OF DIFFERENT SUBSTANCES,
COMPARED WITH WATER.

LIQUIDS, &c.		TIMBER.		METALS.	
Water	100	Cork	24	Zinc	719
Sea Water	103	Poplar	38	Cast-iron	721
Alcohol	84	Fir.....	55	Tin	729
Olive Oil	92	Cedar	61	Bar Iron	779
Turpentine	99	Pear	66	Steel	783
Petroleum	87	Walnut.....	67	Copper.....	869
Wine.....	100	Cherry	72	Brass	840
Cider	102	Maple	75	Silver	1,051
Beer ..	102	Apple	79	Lead.....	1,135
Porter	104	Ash	84	Mercury	1,357
Gravel or Sand, abt.	265	Beech	85	Gold	1,926
Granite	272	Mahogany	106	Platina.....	1,990
		Oak	117		
		Ebony	133		

A gallon of wine or water weighs 10lb.

TABLES,

Longitude.

LIGHTHOUSES.

To find the height at which a Light should be put above the sea level to show a given number of miles :—

Multiply the number of miles by itself, and by 4, and divide the product by 7. Thus, a lamp required to show ten miles— $10 \times 10 = 100 \times 4 = 400$

7) —

55½ feet.

Should be 55½ feet high above the sea level.

SCALE FOR VICTUALLING MERCHANT VESSELS AT SEA.

25550



Abstract

524

NE

32

2

E

4

DIETARY SCALE (WITH FRESH BEEF) FOR CREW.

5

TABLE,

Showing the dimensions of the Common Links, Weights and Scale of Proofs for Chain Cables supplied for Her Majesty's Navy.

ADMIRALTY CRANE CHAIN.

Close linked for Rigging, Cranes, &c., extreme length of link not to exceed 3 diam., and to be proved by a Proving Machine.

in.	diam.	tons.	in.	diam.	tons.	in.	diam.	tons.
1 1/2	diam.	3 1/2	1 1/2	diam.	9	1 1/2	diam.	2 1/2
1 1/4	"	27	1 1/4	"	7 1/2	1 1/4	"	1 1/2
1 1/2	"	22 1/2	1 1/2	"	6	1 1/2	"	1 1/4
1 1/4	"	18 1/2	1 1/4	"	5 1/2	1 1/4	"	1 1/2
1 1/2	"	15 1/2	1 1/2	"	4 1/2	1 1/2	"	1 1/4
1 1/4	"	12 1/2	1 1/4	"	3 1/2	1 1/4	"	1 1/2
1 1/2	"	10 1/2	1 1/2	"	3	1 1/2	"	1 1/4

FORMULA FOR SAFE LOAD ON CHAINS (WORKING LOAD).

D = Diam. in 1/8ths of an inch.
W = Safe Load in tons.

$$D = \sqrt[3]{8 \cdot W}$$

$$W = \frac{D^3}{8}$$

Thus in 1/2 in. Chain, D = 6

$$W = \frac{6^3}{8} = \frac{216}{8} = 27 \text{ tons.}$$

$$D = \sqrt[3]{8 \cdot W} \text{ or } \sqrt[3]{8 \cdot 27} = \sqrt[3]{216} = 6 \text{ or } 1/2 \text{ths of an inch.}$$

Section 39, Act 1855. Cook and cooking apparatus.

Section 40, Act 1855. In what cases interpreters must be carried.

Section 41, Act 1855. In what cases a medical man must be carried.

Section 42, Act 1855. Qualification of medical men.

Section 43, Act 1855. Medicines and medical comforts.

Section 44, Act 1855. Medical inspector of passengers and medicines, &c. Proviso where no medical inspector can be obtained.

Section 45, Act 1855. Re-landing sick passengers.

Passengers' Rights before, during, and after the voyage.

Section 46, Act 1855. Return of passage money to sick passengers re-landed.

Section 11, Act 1863. Return of half-passage money to sick cabin passengers re-landed.

Section 47, Act 1855. Subsistence money to be paid to passengers so re-landed.

Section 48, Act 1855. Return of passage money if passage not provided according to contract.

Section 49, Act 1855. Subsistence money in case of detention.

Section 50, Act 1855. Stores to be replenished when ships put back, and report to be made immediately to Emigration Officer.

Section 14, Act 1863. Passengers' rights in case of wreck or other disaster off the coast. They may be landed for the ship to be repaired.

Section 52, Act 1855. The Secretary of State, Governor or Consul may pay expenses of taking off passengers at sea.

Section 15, Act 1863. Governors or Consuls may send on to their destination shipwrecked passengers, if the master of the ship fail to do so.

Section 16, Act 1863. Expenses incurred under last two sections to be a Crown debt.

Section 55, Act 1855. Insurance of passage-money not to be void on account of nature of the risk.

Section 56, Act 1855. Passengers not to be landed elsewhere than at destination.

Section 57, Act 1855. Passengers to be maintained 48 hours after arrival.

Section 58, Act 1855. Passengers' right of action preserved.

Miscellaneous Provisions.

Section 59, Act 1855. Rules may be prescribed by order in council for health, cleanliness, and ventilation.

Section 60, Act 1855. Surgeon and master to enforce such rules.

Section 61, Act 1855. Copy of Act and extract of Order in Council to be kept and exhibited on board.

Section 62, Act 1855. Sale of spirits on the voyage prohibited.

Section 63, Act 1855. Bond to the Crown by master, &c., in duplicate.

Section 17, Act 1863. Bond when owner, master, or charterer resides abroad.

Section 64, Act 1855. Counterpart of bond to be forwarded to colony.

Section 65, Act 1855. In the absence of agreement to the contrary the owner to be responsible in respect of any default in complying with requirements of Act.

Section 4. Deductions in certain Steamships.—In screw-steamships where an engine-room allowance of 32 per cent. of gross-tonnage has been allowed at time of passing the Act, and which any crew space on deck has not been included in gross tonnage, whether its contents have been deducted therefrom or not, the crew space shall be, on the application of the owner or by direction of the Board of Trade, measured and added to register-tonnage; and if it appears that with such addition the engine-room does not occupy more than 13 per cent. of the tonnage of the ship, the existing allowance of 32 per cent. shall be continued, notwithstanding anything in this Act.

Section 5. Measurement of Ships with Double Bottoms for Water Ballast.—If the spaces between the inner and outer plating is certified by Board of Trade surveyor to be not available for cargo stores or fuel, then depth required by Section 21, paragraph 2, of Merchant Shipping Act, 1854, shall be taken to be the upper side of inner plating of double bottom, which is to be deemed the floor-timber referred to in that section.

Section 6.—Re-measurement of Foreign Ships.—Where tonnage of any foreign ship materially differs from that which would be her tonnage under the Merchant Shipping Act, 1854, and Amending Acts, Her Majesty may by Order in Council direct that such ships may be remeasured in accordance with those Acts.

Section 7. That this Act be cited as the Merchant Shipping (Tonnage) Act, 1889, and be construed as one with the Merchant Shipping Acts, 1854, and the Acts amending the same.

THE MERCHANT SHIPPING (COLOURS) ACT, 1889.

Section 1. Red ensign usually worn by merchant ships is hereby declared to be the proper national colours for all ships and boats belonging to any subject of Her Majesty, except in the case of Her Majesty's or other ships allowed to wear other colours by Royal Warrant or by Admiralty.

Section 2. A ship belonging to any subject of Her Majesty shall, on a signal from one of Her Majesty's ships, and on entering or leaving any foreign port, and if of 50 tons gross or upwards, shall also, on entering or leaving any British port, hoist the proper national colours, under a penalty from the master of one hundred pounds. Sea-fishing boats registered under the Sea Fisheries Acts are exempted from this provision.

Section 3. Amendment of Section 105 of the Merchant Shipping Act, 1854.—Penalties incurred in respect of the improper hoisting of colours or of a pendant in British ships, with costs, may be recovered in Superior Courts in England, Ireland, or Scotland. Any offence mentioned in that section may also be prosecuted and penalty recovered as in the case of offences declared by Merchant Shipping Act, 1854, punishable by penalties not exceeding £100.

Section 4. Defines "one of Her Majesty's ships" as a vessel under command of an officer of Her Majesty's Navy on full pay.

Sections 5 and 6. Saving Admiralty powers in respect of red ensign usually worn by Merchant Ships, and citing this Act as the "*Merchant Shipping (Colours) Act, 1889.*"

SHIPS ENTERED AND CLEARED.—(Continued.)

Name of Port.	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	£	£	£
Dublin	7,735	2,003,787	7,400	1,978,313	377	54,923	2,077,466	130,903	14,037		
Dumfries	508	27,607	482	26,087	84	3,859	2,700	..	..
Dundalk	733	117,368	710	116,855	84	3,218	9,733	..	..
Dundee	1,245	488,197	1,777	459,244	177	115,241	3,852,341	861,175	77,283		
Exeter	870	71,178	848	68,455	38	4,688	173,059	1,237	6,514		
Falmouth	1,707	209,938	1,760	212,468	114	13,586	123,449	36,499	3,177		
Faversham	9,396	439,907	9,085	437,651	243	21,998	21,862	22,099	..		
Fleetwood	1,520	453,552	1,519	452,025	126	14,825	953,389	22,099	..		
Folkestone	1,268	274,446	1,269	274,206	16	2,610	9,339,104	1,678,770	1,232,485		
Fowey	2,398	233,181	2,235	222,160	135	14,925	20,945	146,681	..		
Galway	241	33,165	196	30,564	19	792	128,581	713	..		
Glasgow	9,361	2,185,672	9,480	2,098,835	1,533	3,178,780	10,804,084	14,461,488	523,865		
Gloucester	4,383	478,926	4,254	471,276	188	9,960	2,152,043	80,088	139		
Goole	2,258	530,508	2,597	601,616	245	24,787	4,519,083	4,827,898	295,283		
Grangemouth	1,962	721,724	1,931	723,785	54	10,926	1,002,753	698,316	7,484		
Gronon	473	188,601	438	173,555	41	2,648	417,724	62,772	9,450		
Greenock	6,630	1,379,616	6,903	1,528,164	728	223,387	3,170,328	176,385	49,162		
Grimby	1,647	656,390	1,540	624,451	885	69,701	5,277,088	6,860,390	128,051		
Hartlepool	3,158	924,254	3,171	922,896	261	246,056	1,715,821	883,715	15,221		
Harwich	3,170	626,775	2,952	670,924	128	14,564	13,769,661	3,140,473	1,684,283		
Hull	5,258	2,317,499	5,034	2,299,207	858	211,938	23,075,465	15,128,647	4,471,068		
Inverness	3,139	362,953	3,000	357,892	68	6,275	58,991	22,354	..		
Ipswich	3,847	275,688	3,380	274,484	135	8,560	263,455	53,597	400		
Isle of Man	3,871	719,045	3,908	722,103	127	13,366	33,887	..	..
Kirkcaldy	3,383	605,050	2,430	665,753	15	939	213,641	325,761	..		
Kirkwall	2,414	214,740	2,331	207,905	34	2,100	6,611	15,206	..		
Lancaster	752	95,153	742	93,915	54	9,343	38,000	2,327	..		
Leith	3,068	1,051,752	2,748	984,307	174	88,163	8,966,927	3,026,038	211,033		
Lerwick	375	84,826	530	85,098	58	2,787	7,156	98,432	..		
Limerick	510	152,285	499	147,068	25	1,308	636,247	3,690	..		
Littlehampton	436	31,724	438	31,056	27	3,446	31,671	200	..		
Liverpool	17,676	8,104,144	17,111	8,022,059	2,305	1,836,664	97,235,393	97,187,033	14,043,698		
Llanelli	1,228	167,646	1,233	168,864	32	4,733	42,378	90,145	..		
London	55,081	13,114,901	27,930	7,497,885	2,534	1,243,298	138,183,465	90,211,258	37,572,768		
Londonderry	1,667	333,680	1,599	328,171	18	8,974	367,542	914	..		
Lowestoft	790	91,901	960	99,564	46	18,876	89,998	5,268	..		
Lynn	1,031	146,669	1,008	142,628	90	7,073	539,704	15,493	..		
Maryport	2,459	239,681	2,456	244,501	41	18,758	134,202	287,120	..		
Middlesbrough	3,445	1,340,940	3,619	1,230,279	99	35,606	775,485	2,075,795	5,244		
Milford	1,667	328,628	1,666	323,665	77	5,390	41,327	100	..		
Monrovia	551	94,468	530	89,234	39	4,914	280,401	99,413	..		
Newcastle	See	Tyne Ports.	..	..	..	..	..	..	..
Newhaven	1,955	375,921	1,570	370,279	27	4,951	9,767,773	1,461,040	207,213		
Newport (Mon.)	9,345	2,879,540	9,326	2,861,069	219	32,246	746,795	1,512,647	27,816		

TOTAL SHIPPING TRADE OF GREAT BRITAIN & IRELAND IN THE PAST THREE YEARS.

	Vessels Entered.		Vessels Cleared.		Total Number of Vessels Registered.		Total Number of Vessels Employed.		Total Number of Persons Employed	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.	British.	Foreigners.
1886	346,686	75,041,451	300,108	69,235,663	37,569	9,246,732	27,917	7,144,097	162,614	25,183
1887	357,405	77,664,486	319,024	71,978,474	36,372	9,135,312	27,723	7,123,754	160,912	24,046
1888	377,459	81,525,727	341,979	76,510,792	36,462	9,209,883	27,584	7,352,888	179,969	25,277

TABLE A—(Continued.)

FREEBOARD.

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100

A. Correction in inches for a change of 20 ft. in the length. B. Deduction in inches for summer voyage.
 C. Addition in inches for winter, North Atlantic.

TABLE B.—(Continued.)

Coefficient of Fineness.	Height of Freeboard Amidships (Winter), Measured from Top of Spar Deck at Side.															
	Moulded Depth (to Main Deck) and Length															
	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.	ft. in.
	23 6	24 0	24 6	25 0	25 6	26 0	26 6	27 0	27 6	28 0	28 6	29 0	29 6	30 0	30 6	31 0
	ft. 366	ft. 372	ft. 378	ft. 384	ft. 390	ft. 396	ft. 402	ft. 408	ft. 414	ft. 420	ft. 426	ft. 432	ft. 438	ft. 444		
'68	8 2	8 4½	8 7	8 9½	9 0	9 2½	9 5½	9 8	9 11	10 2	10 5	10 8½	10 11½	11 3		
'70	8 3	8 5½	8 8	8 10½	9 1	9 3½	9 6½	9 9	10 0	10 3	10 6	10 9½	11 0½	11 4		
'72	8 3½	8 6	8 8½	8 11	9 2	9 4½	9 7½	9 10	10 1	10 4	10 7	10 10½	11 1½	11 5		
'74	8 4½	8 7	8 9½	9 0	9 3	9 5½	9 8½	9 11	10 2	10 5	10 8	10 11½	11 2½	11 6		
'76	8 5	8 7½	8 10	9 0½	9 3½	9 6	9 9	10 0	10 3	10 5	10 9	11 0½	11 3½	11 7		
'78	8 5½	8 8	8 11	9 2½	9 4½	9 7	9 10	10 1	10 4	10 7	10 10	11 1½	11 4½	11 8		
'80	8 6	8 8½	8 11½	9 2	9 5	9 7½	9 10½	10 1½	10 4½	10 7½	10 10½	11 2	11 5½	11 9		
'82	8 7	8 9½	9 0½	9 3	9 6	9 8½	9 11½	10 2½	10 5½	10 8½	10 11½	11 3	11 6½	11 10		
A	1'2	1'3	1'3	1'3	1'3	1'3	1'4	1'4	1'4	1'4	1'5	1'5	1'5	1'5		
B	5	5	5	5½	5½	5½	5½	6	6	6	6	6½	6½	6½		
C	5½	5½	5½	5½	5½	6	6	6	6	6	6	6½	6½	6½		

A. Correction in inches for a change of 10 ft. in the length.

C. Addition in inches for winter, North Atlantic.

B. Deduction in inches for summer voyage.

TABLE C--CARGO-CARRYING AWNING-DECK VESSELS.

Table of Reserve Buoyancy and Preload for First-class Sea-going Awning-deck Steen Vessels (in Salt Water)

PREBOARD.

TABLE C.—(Continued.)

No.	Name	Type	Length	Beam	Draft	Speed	Horse Power	Gross Tonnage	Net Tonnage	Passenger Capacity	Cargo Capacity	Remarks
1	Albatross	Steamer	100	20	10	12	1,000	1,000	1,000	100	1,000	
2	Albatross	Steamer	100	20	10	12	1,000	1,000	1,000	100	1,000	
3	Albatross	Steamer	100	20	10	12	1,000	1,000	1,000	100	1,000	
4	Albatross	Steamer	100	20	10	12	1,000	1,000	1,000	100	1,000	
5	Albatross	Steamer	100	20	10	12	1,000	1,000	1,000	100	1,000	
6	Albatross	Steamer	100	20	10	12	1,000	1,000	1,000	100	1,000	
7	Albatross	Steamer	100	20	10	12	1,000	1,000	1,000	100	1,000	
8	Albatross	Steamer	100	20	10	12	1,000	1,000	1,000	100	1,000	
9	Albatross	Steamer	100	20	10	12	1,000	1,000	1,000	100	1,000	
10	Albatross	Steamer	100	20	10	12	1,000	1,000	1,000	100	1,000	

A. Correction in inches for a change of 10 ft. in the length
 B. Deduction in inches for summer voyage
 C. Addition in inches winter, North Atlantic.

TABLE D.—SAILING VESSELS.
Table of Reserve Buoyancy and Freeboard for First-class Sea-going Iron and Steel Sailing Vessels and Composite and Wood Vessels of the Highest Class (in Salt Water).

FREEBOARD.

Length Feet	10	20	30	40	50	60	70	80	90	100	110	120	130	140	150	160	170	180	190	200
A	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
B	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
C	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10

A. Correction in inches for a change of 10 ft. in the length.
 B. Deduction in inches for summer voyage.
 C. Addition in inches for winter, North Atlantic.

TABLE B.~(Continued.)

Ancona (Italy), A. P. Tomassini, V.C.
Angolá, see *Loanda*
Angora (Turkey), Tom Newton, V.C.
Antananarivo (Madagascar), W. C. Pickersgill, V.C.
Antofagasta (Chili), J. Barnett, V.C.
Antwerp (Belgium), G. R. Perry, C.G.
Archangel (Russia), J. B. Cobb, V.C.
Arica (Chili), W. Finlayson, V.C

THE PRINCIPAL NATIONS, GOVERNMENTS, RELIGIONS, POPULATION, AREA, PUBLIC DEBT, RULERS, &c., OF THE WORLD.

ABBREVIATIONS:—D. = Duchy ; E. = Empire ; F.S. = Free State ; G.D. = Grand Duchy, K. = Kingdom ; O.E. = Ottoman Empire ; P. (in Government)
= Principality ; R. = Republic ; S. = Sultanry ; B. = Buddhism ; C. = Christian ; D.R.C. = Dutch Reformed Church ; G.C. = Greek Church ;
G.R. = Græco-Russian, L. = Lutheran ; M. = Mahometan ; P. (in Religion) Protestant ; P.E. = Protestant Episcopal ; R.C. = Roman
Catholic ; R.P. = Reformed Protestant.

**RATES OF FREIGHTS ON CERTAIN ARTICLES, AT THE FOLLOWING DATES, IN THE
UNDERMENTIONED TRADES.**

126

14

ar

R

11

up

L

st

3d

sl

re

pa

cc

D

T

h

h

O

K

m

4'

c

N

P

H

TH

Id

C

oil-cake, grain, timber, &c. ; E. Clay, timber, pitwood, &c

* Sill above Datum.

NOTE.—The depth of water over the sills of the Sandon Graving Docks can be increased to any desired extent by pumping into the Sandon Dock from the River, so as to allow deep-draughted vessels to enter at low neap tides.

in case of weather or accident, the pilot in charge shall be responsible for the payment of the pilotage charge in addition, according to the tonnage of the vessel, before she shall get under way. The following charges, a clerk or collector's fee, and a fee for the pilot's services under tonnage 64; 100 and under 100 tons 15; 150 and under 300 tons 16; 300 and under 500 tons 17; 500 and under 1,000 tons 18; 1,000 and under 1,500 tons 19; 1,500 and under 2,000 tons 20.

Pilotage. (For the whole length of the canal): under 30 tons 1; 30 to 100 tons 2; 100 to 150 tons 3; 150 to 200 tons 4; 200 to 300 tons 5; 300 to 400 tons 6; 400 to 500 tons 7; 500 to 600 tons 8; 600 to 700 tons 9; 700 to 800 tons 10; 800 to 900 tons 11; 900 to 1,000 tons 12; 1,000 to 1,500 tons 13; 1,500 to 2,000 tons 14; 2,000 to 3,000 tons 15; 3,000 to 4,000 tons 16; 4,000 to 5,000 tons 17; 5,000 to 6,000 tons 18; 6,000 to 7,000 tons 19; 7,000 to 8,000 tons 20; 8,000 to 9,000 tons 21; 9,000 to 10,000 tons 22; 10,000 to 15,000 tons 23; 15,000 to 20,000 tons 24; 20,000 to 25,000 tons 25; 25,000 to 30,000 tons 26; 30,000 to 35,000 tons 27; 35,000 to 40,000 tons 28; 40,000 to 45,000 tons 29; 45,000 to 50,000 tons 30; 50,000 to 55,000 tons 31; 55,000 to 60,000 tons 32; 60,000 to 65,000 tons 33; 65,000 to 70,000 tons 34; 70,000 to 75,000 tons 35; 75,000 to 80,000 tons 36; 80,000 to 85,000 tons 37; 85,000 to 90,000 tons 38; 90,000 to 95,000 tons 39; 95,000 to 100,000 tons 40; 100,000 to 105,000 tons 41; 105,000 to 110,000 tons 42; 110,000 to 115,000 tons 43; 115,000 to 120,000 tons 44; 120,000 to 125,000 tons 45; 125,000 to 130,000 tons 46; 130,000 to 135,000 tons 47; 135,000 to 140,000 tons 48; 140,000 to 145,000 tons 49; 145,000 to 150,000 tons 50; 150,000 to 155,000 tons 51; 155,000 to 160,000 tons 52; 160,000 to 165,000 tons 53; 165,000 to 170,000 tons 54; 170,000 to 175,000 tons 55; 175,000 to 180,000 tons 56; 180,000 to 185,000 tons 57; 185,000 to 190,000 tons 58; 190,000 to 195,000 tons 59; 195,000 to 200,000 tons 60; 200,000 to 205,000 tons 61; 205,000 to 210,000 tons 62; 210,000 to 215,000 tons 63; 215,000 to 220,000 tons 64; 220,000 to 225,000 tons 65; 225,000 to 230,000 tons 66; 230,000 to 235,000 tons 67; 235,000 to 240,000 tons 68; 240,000 to 245,000 tons 69; 245,000 to 250,000 tons 70; 250,000 to 255,000 tons 71; 255,000 to 260,000 tons 72; 260,000 to 265,000 tons 73; 265,000 to 270,000 tons 74; 270,000 to 275,000 tons 75; 275,000 to 280,000 tons 76; 280,000 to 285,000 tons 77; 285,000 to 290,000 tons 78; 290,000 to 295,000 tons 79; 295,000 to 300,000 tons 80; 300,000 to 305,000 tons 81; 305,000 to 310,000 tons 82; 310,000 to 315,000 tons 83; 315,000 to 320,000 tons 84; 320,000 to 325,000 tons 85; 325,000 to 330,000 tons 86; 330,000 to 335,000 tons 87; 335,000 to 340,000 tons 88; 340,000 to 345,000 tons 89; 345,000 to 350,000 tons 90; 350,000 to 355,000 tons 91; 355,000 to 360,000 tons 92; 360,000 to 365,000 tons 93; 365,000 to 370,000 tons 94; 370,000 to 375,000 tons 95; 375,000 to 380,000 tons 96; 380,000 to 385,000 tons 97; 385,000 to 390,000 tons 98; 390,000 to 395,000 tons 99; 395,000 to 400,000 tons 100; 400,000 to 405,000 tons 101; 405,000 to 410,000 tons 102; 410,000 to 415,000 tons 103; 415,000 to 420,000 tons 104; 420,000 to 425,000 tons 105; 425,000 to 430,000 tons 106; 430,000 to 435,000 tons 107; 435,000 to 440,000 tons 108; 440,000 to 445,000 tons 109; 445,000 to 450,000 tons 110; 450,000 to 455,000 tons 111; 455,000 to 460,000 tons 112; 460,000 to 465,000 tons 113; 465,000 to 470,000 tons 114; 470,000 to 475,000 tons 115; 475,000 to 480,000 tons 116; 480,000 to 485,000 tons 117; 485,000 to 490,000 tons 118; 490,000 to 495,000 tons 119; 495,000 to 500,000 tons 120; 500,000 to 505,000 tons 121; 505,000 to 510,000 tons 122; 510,000 to 515,000 tons 123; 515,000 to 520,000 tons 124; 520,000 to 525,000 tons 125; 525,000 to 530,000 tons 126; 530,000 to 535,000 tons 127; 535,000 to 540,000 tons 128; 540,000 to 545,000 tons 129; 545,000 to 550,000 tons 130; 550,000 to 555,000 tons 131; 555,000 to 560,000 tons 132; 560,000 to 565,000 tons 133; 565,000 to 570,000 tons 134; 570,000 to 575,000 tons 135; 575,000 to 580,000 tons 136; 580,000 to 585,000 tons 137; 585,000 to 590,000 tons 138; 590,000 to 595,000 tons 139; 595,000 to 600,000 tons 140; 600,000 to 605,000 tons 141; 605,000 to 610,000 tons 142; 610,000 to 615,000 tons 143; 615,000 to 620,000 tons 144; 620,000 to 625,000 tons 145; 625,000 to 630,000 tons 146; 630,000 to 635,000 tons 147; 635,000 to 640,000 tons 148; 640,000 to 645,000 tons 149; 645,000 to 650,000 tons 150; 650,000 to 655,000 tons 151; 655,000 to 660,000 tons 152; 660,000 to 665,000 tons 153; 665,000 to 670,000 tons 154; 670,000 to 675,000 tons 155; 675,000 to 680,000 tons 156; 680,000 to 685,000 tons 157; 685,000 to 690,000 tons 158; 690,000 to 695,000 tons 159; 695,000 to 700,000 tons 160; 700,000 to 705,000 tons 161; 705,000 to 710,000 tons 162; 710,000 to 715,000 tons 163; 715,000 to 720,000 tons 164; 720,000 to 725,000 tons 165; 725,000 to 730,000 tons 166; 730,000 to 735,000 tons 167; 735,000 to 740,000 tons 168; 740,000 to 745,000 tons 169; 745,000 to 750,000 tons 170; 750,000 to 755,000 tons 171; 755,000 to 760,000 tons 172; 760,000 to 765,000 tons 173; 765,000 to 770,000 tons 174; 770,000 to 775,000 tons 175; 775,000 to 780,000 tons 176; 780,000 to 785,000 tons 177; 785,000 to 790,000 tons 178; 790,000 to 795,000 tons 179; 795,000 to 800,000 tons 180; 800,000 to 805,000 tons 181; 805,000 to 810,000 tons 182; 810,000 to 815,000 tons 183; 815,000 to 820,000 tons 184; 820,000 to 825,000 tons 185; 825,000 to 830,000 tons 186; 830,000 to 835,000 tons 187; 835,000 to 840,000 tons 188; 840,000 to 845,000 tons 189; 845,000 to 850,000 tons 190; 850,000 to 855,000 tons 191; 855,000 to 860,000 tons 192; 860,000 to 865,000 tons 193; 865,000 to 870,000 tons 194; 870,000 to 875,000 tons 195; 875,000 to 880,000 tons 196; 880,000 to 885,000 tons 197; 885,000 to 890,000 tons 198; 890,000 to 895,000 tons 199; 895,000 to 900,000 tons 200; 900,000 to 905,000 tons 201; 905,000 to 910,000 tons 202; 910,000 to 915,000 tons 203; 915,000 to 920,000 tons 204; 920,000 to 925,000 tons 205; 925,000 to 930,000 tons 206; 930,000 to 935,000 tons 207; 935,000 to 940,000 tons 208; 940,000 to 945,000 tons 209; 945,000 to 950,000 tons 210; 950,000 to 955,000 tons 211; 955,000 to 960,000 tons 212; 960,000 to 965,000 tons 213; 965,000 to 970,000 tons 214; 970,000 to 975,000 tons 215; 975,000 to 980,000 tons 216; 980,000 to 985,000 tons 217; 985,000 to 990,000 tons 218; 990,000 to 995,000 tons 219; 995,000 to 1,000,000 tons 220; 1,000,000 to 1,005,000 tons 221; 1,005,000 to 1,010,000 tons 222; 1,010,000 to 1,015,000 tons 223; 1,015,000 to 1,020,000 tons 224; 1,020,000 to 1,025,000 tons 225; 1,025,000 to 1,030,000 tons 226; 1,030,000 to 1,035,000 tons 227; 1,035,000 to 1,040,000 tons 228; 1,040,000 to 1,045,000 tons 229; 1,045,000 to 1,050,000 tons 230; 1,050,000 to 1,055,000 tons 231; 1,055,000 to 1,060,000 tons 232; 1,060,000 to 1,065,000 tons 233; 1,065,000 to 1,070,000 tons 234; 1,070,000 to 1,075,000 tons 235; 1,075,000 to 1,080,000 tons 236; 1,080,000 to 1,085,000 tons 237; 1,085,000 to 1,090,000 tons 238; 1,090,000 to 1,095,000 tons 239; 1,095,000 to 1,100,000 tons 240; 1,100,000 to 1,105,000 tons 241; 1,105,000 to 1,110,000 tons 242; 1,110,000 to 1,115,000 tons 243; 1,115,000 to 1,120,000 tons 244; 1,120,000 to 1,125,000 tons 245; 1,125,000 to 1,130,000 tons 246; 1,130,000 to 1,135,000 tons 247; 1,135,000 to 1,140,000 tons 248; 1,140,000 to 1,145,000 tons 249; 1,145,000 to 1,150,000 tons 250; 1,150,000 to 1,155,000 tons 251; 1,155,000 to 1,160,000 tons 252; 1,160,000 to 1,165,000 tons 253; 1,165,000 to 1,170,000 tons 254; 1,170,000 to 1,175,000 tons 255; 1,175,000 to 1,180,000 tons 256; 1,180,000 to 1,185,000 tons 257; 1,185,000 to 1,190,000 tons 258; 1,190,000 to 1,195,000 tons 259; 1,195,000 to 1,200,000 tons 260; 1,200,000 to 1,205,000 tons 261; 1,205,000 to 1,210,000 tons 262; 1,210,000 to 1,215,000 tons 263; 1,215,000 to 1,220,000 tons 264; 1,220,000 to 1,225,000 tons 265; 1,225,000 to 1,230,000 tons 266; 1,230,000 to 1,235,000 tons 267; 1,235,000 to 1,240,000 tons 268; 1,240,000 to 1,245,000 tons 269; 1,245,000 to 1,250,000 tons 270; 1,250,000 to 1,255,000 tons 271; 1,255,000 to 1,260,000 tons 272; 1,260,000 to 1,265,000 tons 273; 1,265,000 to 1,270,000 tons 274; 1,270,000 to 1,275,000 tons 275; 1,275,000 to 1,280,000 tons 276; 1,280,000 to 1,285,000 tons 277; 1,285,000 to 1,290,000 tons 278; 1,290,000 to 1,295,000 tons 279; 1,295,000 to 1,300,000 tons 280; 1,300,000 to 1,305,000 tons 281; 1,305,000 to 1,310,000 tons 282; 1,310,000 to 1,315,000 tons 283; 1,315,000 to 1,320,000 tons 284; 1,320,000 to 1,325,000 tons 285; 1,325,000 to 1,330,000 tons 286; 1,330,000 to 1,335,000 tons 287; 1,335,000 to 1,340,000 tons 288; 1,340,000 to 1,345,000 tons 289; 1,345,000 to 1,350,000 tons 290; 1,350,000 to 1,355,000 tons 291; 1,355,000 to 1,360,000 tons 292; 1,360,000 to 1,365,000 tons 293; 1,365,000 to 1,370,000 tons 294; 1,370,000 to 1,375,000 tons 295; 1,375,000 to 1,380,000 tons 296; 1,380,000 to 1,385,000 tons 297; 1,385,000 to 1,390,000 tons 298; 1,390,000 to 1,395,000 tons 299; 1,395,000 to 1,400,000 tons 300; 1,400,000 to 1,405,000 tons 301; 1,405,000 to 1,410,000 tons 302; 1,410,000 to 1,415,000 tons 303; 1,415,000 to 1,420,000 tons 304; 1,420,000 to 1,425,000 tons 305; 1,425,000 to 1,430,000 tons 306; 1,430,000 to 1,435,000 tons 307; 1,435,000 to 1,440,000 tons 308; 1,440,000 to 1,445,000 tons 309; 1,445,000 to 1,450,000 tons 310; 1,450,000 to 1,455,000 tons 311; 1,455,000 to 1,460,000 tons 312; 1,460,000 to 1,465,000 tons 313; 1,465,000 to 1,470,000 tons 314; 1,470,000 to 1,475,000 tons 315; 1,475,000 to 1,480,000 tons 316; 1,480,000 to 1,485,000 tons 317; 1,485,000 to 1,490,000 tons 318; 1,490,000 to 1,495,000 tons 319; 1,495,000 to 1,500,000 tons 320; 1,500,000 to 1,505,000 tons 321; 1,505,000 to 1,510,000 tons 322; 1,510,000 to 1,515,000 tons 323; 1,515,000 to 1,520,000 tons 324; 1,520,000 to 1,525,000 tons 325; 1,525,000 to 1,530,000 tons 326; 1,530,000 to 1,535,000 tons 327; 1,535,000 to 1,540,000 tons 328; 1,540,000 to 1,545,000 tons 329; 1,545,000 to 1,550,000 tons 330; 1,550,000 to 1,555,000 tons 331; 1,555,000 to 1,560,000 tons 332; 1,560,000 to 1,565,000 tons 333; 1,565,000 to 1,570,000 tons 334; 1,570,000 to 1,575,000 tons 335; 1,575,000 to 1,580,000 tons 336; 1,580,000 to 1,585,000 tons 337; 1,585,000 to 1,590,000 tons 338; 1,590,000 to 1,595,000 tons 339; 1,595,000 to 1,600,000 tons 340; 1,600,000 to 1,605,000 tons 341; 1,605,000 to 1,610,000 tons 342; 1,610,000 to 1,615,000 tons 343; 1,615,000 to 1,620,000 tons 344; 1,620,000 to 1,625,000 tons 345; 1,625,000 to 1,630,000 tons 346; 1,630,000 to 1,635,000 tons 347; 1,635,000 to 1,640,000 tons 348; 1,640,000 to 1,645,000 tons 349; 1,645,000 to 1,650,000 tons 350; 1,650,000 to 1,655,000 tons 351; 1,655,000 to 1,660,000 tons 352; 1,660,000 to 1,665,000 tons 353; 1,665,000 to 1,670,000 tons 354; 1,670,000 to 1,675,000 tons 355; 1,675,000 to 1,680,000 tons 356; 1,680,000 to 1,685,000 tons 357; 1,685,000 to 1,690,000 tons 358; 1,690,000 to 1,695,000 tons 359; 1,695,000 to 1,700,000 tons 360; 1,700,000 to 1,705,000 tons 361; 1,705,000 to 1,710,000 tons 362; 1,710,000 to 1,715,000 tons 363; 1,715,000 to 1,720,000 tons 364; 1,720,000 to 1,725,000 tons 365; 1,725,000 to 1,730,000 tons 366; 1,730,000 to 1,735,000 tons 367; 1,735,000 to 1,740,000 tons 368; 1,740,000 to 1,745,000 tons 369; 1,745,000 to 1,750,000 tons 370; 1,750,000 to 1,755,000 tons 371; 1,755,000 to 1,760,000 tons 372; 1,760,000 to 1,765,000 tons 373; 1,765,000 to 1,770,000 tons 374; 1,770,000 to 1,775,000 tons 375; 1,775,000 to 1,780,000 tons 376; 1,780,000 to 1,785,000 tons 377; 1,785,000 to 1,790,000 tons 378; 1,790,000 to 1,795,000 tons 379; 1,795,000 to 1,800,000 tons 380; 1,800,000 to 1,805,000 tons 381; 1,805,000 to 1,810,000 tons 382; 1,810,000 to 1,815,000 tons 383; 1,815,000 to 1,820,000 tons 384; 1,820,000 to 1,825,000 tons 385; 1,825,000 to 1,830,000 tons 386; 1,830,000 to 1,835,000 tons 387; 1,835,000 to 1,840,000 tons 388; 1,840,000 to 1,845,000 tons 389; 1,845,000 to 1,850,000 tons 390; 1,850,000 to 1,855,000 tons 391; 1,855,000 to 1,860,000 tons 392; 1,860,000 to 1,865,000 tons 393; 1,865,000 to 1,870,000 tons 394; 1,870,000 to 1,875,000 tons 395; 1,875,000 to 1,880,000 tons 396; 1,880,000 to 1,885,000 tons 397; 1,885,000 to 1,890,000 tons 398; 1,890,000 to 1,895,000 tons 399; 1,895,000 to 1,900,000 tons 400; 1,900,000 to 1,905,000 tons 401; 1,905,000 to 1,910,000 tons 402; 1,910,000 to 1,915,000 tons 403; 1,915,000 to 1,920,000 tons 404; 1,920,000 to 1,925,000 tons 405; 1,925,000 to 1,930,000 tons 406; 1,930,000 to 1,935,000 tons 407; 1,935,000 to 1,940,000 tons 408; 1,940,000 to 1,945,000 tons 409; 1,945,000 to 1,950,000 tons 410; 1,950,000 to 1,955,000 tons 411; 1,955,000 to 1,960,000 tons 412; 1,960,000 to 1,965,000 tons 413; 1,965,000 to 1,970,000 tons 414; 1,970,000 to 1,975,000 tons 415; 1,975,000 to 1,980,000 tons 416; 1,980,000 to 1,985,000 tons 417; 1,985,000 to 1,990,000 tons 418; 1,990,000 to 1,995,000 tons 419; 1,995,000 to 2,000,000 tons 420; 2,000,000 to 2,005,000 tons 421; 2,005,000 to 2,010,000 tons 422; 2,010,000 to 2,015,000 tons 423; 2,015,000 to 2,020,000 tons 424; 2,020,000 to 2,025,000 tons 425; 2,025,000 to 2,030,000 tons 426; 2,030,000 to 2,035,000 tons 427; 2,035,000 to 2,040,000 tons 428; 2,040,000 to 2,045,000 tons 429; 2,045,000 to 2,050,000 tons 430; 2,050,000 to 2,055,000 tons 431; 2,055,000 to 2,060,000 tons 432; 2,060,000 to 2,065,000 tons 433; 2,065,000 to 2,070,000 tons 434; 2,070,000 to 2,075,000 tons 435; 2,075,000 to 2,080,000 tons 436; 2,080,000 to 2,085,000 tons 437; 2,085,000 to 2,090,000 tons 438; 2,090,000 to 2,095,000 tons 439; 2,095,000 to 2,100,000 tons 440; 2,100,000 to 2,105,000 tons 441; 2,105,000 to 2,110,000 tons 442; 2,110,000 to 2,115,000 tons 443; 2,115,000 to 2,120,000 tons 444; 2,120,000 to 2,125,000 tons 445; 2,125,000 to 2,130,000 tons 446; 2,130,000 to 2,135,000 tons 447; 2,135,000 to 2,140,000 tons 448; 2,140,000 to 2,145,000 tons 449; 2,145,000 to 2,150,000 tons 450; 2,150,000 to 2,155,000 tons 451; 2,155,000 to 2,160,000 tons 452; 2,160,000 to 2,165,000 tons 453; 2,165,000 to 2,170,000 tons 454; 2,170,000 to 2,175,000 tons 455; 2,175,000 to 2,180,000 tons 456; 2,180,000 to 2,185,000 tons 457; 2,185,000 to 2,190,000 tons 458; 2,190,000 to 2,195,000 tons 459; 2,195,000 to 2,200,000 tons 460; 2,200,000 to 2,205,000 tons 461; 2,205,000 to 2,210,000 tons 462; 2,210,000 to 2,215,000 tons 463; 2,215,000 to 2,220,000 tons 464; 2,220,000 to 2,225,000 tons 465; 2,225,000 to 2,230,000 tons 466; 2,230,000 to 2,235,000 tons 467; 2,235,000 to 2,240,000 tons 468; 2,240,000 to 2,245,000 tons 469; 2,245,000 to 2,250,000 tons 470; 2,250,000 to 2,255,000 tons 471; 2,255,000 to 2,260,000 tons 472; 2,260,000 to 2,265,000 tons 473; 2,265,000 to 2,270,000 tons 474; 2,270,000 to 2,275,000 tons 475; 2,275,000 to 2,280,000 tons 476; 2,280,000 to 2,285,000 tons 477; 2,285,000 to 2,290,000 tons 478; 2,290,000 to 2,295,000 tons 479; 2,295,000 to 2,300,000 tons 480; 2,300,000 to 2,305,000 tons 481; 2,305,000 to 2,310,000 tons 482; 2,310,000 to 2,315,000 tons 483; 2,315,000 to 2,320,000 tons 484; 2,320,000 to 2,325,000 tons 485; 2,325,000 to 2,330,000 tons 486; 2,330,000 to 2,335,000 tons 487; 2,335,000 to 2,340,000 tons 488; 2,340,000 to 2,345,000 tons 489; 2,345,000 to 2,350,000 tons 490; 2,350,000 to 2,355,000 tons 491; 2,355,000 to 2,360,000 tons 492; 2,360,000 to

Navigation School—

	PAGE
Rosser, W. H.	xxxii

Oils, Paints, and Varnish—

Goodall & Co.	xxiv
Graham, M. & Co.	xxxv
Holzappel & Co.	<i>facing preface</i>

Printers—

Unwin Bros.	xxvi
------------------	------

Publications—

Civil and Mechanical Engineering	xxviii
Harbours and Docks	xxviii
Industries	xxviii
Liverpool Journal of Commerce	xxvi
Newcastle Chronicle	xxvii
Newcastle Daily Leader	xxvii
Scott's Code	xxxv
Shipping World Series	xxxviii
The Shipping World	546

Pumps—

Drysdale & Co.	xxxviii
---------------------	---------

Refreshment Contractors—

Culley, R. P. & Co.	xvii
--------------------------	------

Rope Manufacturers—

Cardiff Ropeworks Co., Ltd.	xxx
----------------------------------	-----

Ship and Insurance Brokers—

Baker & Butt.	xxx
Batt, A. W.	xxvi
Best, J. P. & Co.	xxxiv
Bradbeer, B. M.	xxxii
Clapham, H. & Co.	xxxii
Crosby, J. W. & Co.	xxxiv
Curtiss & Sons	xxxiii
Daley & Foley.	xxxii
Davies, J. R. & Co.	xxxiii
England, P. W.	xxxiv
Haddon & Benvis.	xxxiii
Oates, Thos. & S.	xxxii
Pritchard Bros and Co.	xxxiii
Pyatt, John	xxxii
Salt, Chas. & Co.	xxxiv
Turner, F. W.	xxxii
Watson, Thos.	xxxiii

Shipbuilders and Repairers—

	PAGE
Blyth Shipbuilding Co., Ltd.	xxx
Bute Shipbuilding Co., Ltd.	xxiv
Dunston-on-Tyne Shipbuilding, &c., Co.	xxxii
Hepple & Co.	xxxii
Loos, Anderson & Co.	xxxvii
Mountstuart Shipbuilding Co.	xv
Roberts, J. H.	xxxii
Simons, W. & Co.	xxi
Swan & Hunter	xxiv
Swansea Dry Docks Co., Ltd.	xxxiii
Tyne Pontoons Co., Ltd.	xxxiii
Wallsend Pontoon Co., Ltd.	xxxii

Ship Chandlers—

Elliott, Joseph and Sons	xxx
Jenkins, Sydney D. & Son	xxxii
Knapp Bros. & Co.	xxx

Shipping Agents—

Best, J. P. & Co.	xxxiv
Blaklock Bros.	xxxiv
Bradbeer, B. M.	xxxii
Curtiss & Sons	xxxiii
Elias, F. X.	xxxv
Shackleton, J. F. & Son	xxxii

Ships' Biscuits—

Baker, Wm. & Sons ..	xxxii
----------------------	-------

Shipping Tackle—

Patent Ferrule Co.	xxx
-------------------------	-----

Steamships—

"Atlantic Transport" Line (Williams, Torrey & Field, Ltd.)	xxxix
"Laird" Line	xi
"Orient" Line	xi
"State" Line	xii

Stevedores, &c.—

Low Level Haulage Co.	xxxiii
----------------------------	--------

Tubes—

Benbow, P.	xxx
Broughton Copper Co.	xxxiii
Lloyd & Lloyd	xxxiii
Spencer, J.	xxxiii

Bordering on the Docks there are upwards of **270 acres** of land which offers superior and exceptional advantages for the establishment of **Timber Yards, Saw Mills, &c.**, and of **Manufactories and Industrial Works** in connection with the Shipping and Trade of the Port.

Bona-fide applications from **Capitalists, Manufacturers, and others**, to rent or lease portions of this land, addressed to the undersigned, will receive the favourable consideration of the Commissioners.

The Commissioners' **TIMBER PONDS**, at **Jarrow Slake**, opposite Northumberland Dock, having direct access from the river, cover an area of **89 acres**.

The **TYNE**, as the **Principal Coal Port** in the Kingdom, affords unsurpassed advantages to vessels arriving with Inward Cargoes and requiring Outward Freights.

The yearly exports of Coal and Coke have reached upwards of **9 $\frac{3}{4}$ million tons**.

Ballast is quickly discharged or loaded from or into Vessels by the Commissioners' S.S. Ballast Hopper Barges.

Excellent facilities exist in the Port for discharging and loading Vessels, and for warehousing and storing all descriptions of General Merchandise, Timber, Grain, &c.

Vessels "calling" in the Tyne to "**Bunker**" at the Commissioners' Docks and Staiths, where they can obtain the best **Northumberland Steam Coal** on the most favourable terms, have the benefit of greatly modified Dues.

Information as to Rates and Charges may be obtained on application to the Commissioners' Traffic Manager, Northumberland Dock, Percy Main, or to

ROBERT URWIN,
Secretary.

TYNE IMPROVEMENT COMMISSION OFFICES,
NEWCASTLE-UPON-TYNE,
September, 1887.

